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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,718	11/26/2001	Masahiro Kobayashi	111195	3918

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EXAMINER

PEREZ, GUILLERMO

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 04/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/991,718

Applicant(s)

KOBAYASHI ET AL

Examiner

Guillermo Perez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 9, 11 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "said uneven section for increasing the creeping distance" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (U. S. Pat. 4,881,001) in view of Andrey (U. S. Pat. 5,723,931) and further in view of Suzuki (U. S. Pat. 5,508,578).

Patel et al. substantially teaches the claimed invention except that it does not show that the stator assembly having the stator windings wound around the coil winding sections thereof is surrounded by a synthetic resin, characterized in that: the synthetic

resin surrounds the first stator magnetic-pole assembly and the second stator magnetic-pole assembly at the stator winding sections in a manner such that a surface at which the fixed magnetic-pole teeth of the stator core face a rotor is exposed, and a surface of the synthetic resin forms the same circumferential surface as the surface at which the fixed magnetic-pole teeth of the stator core face the rotor.

Patel et al. do not disclose that the first stator magnetic-pole assembly and the second stator magnetic-pole assembly include uneven sections for increasing a creeping distance at a contact section relative to the synthetic resin. Patel et al. do not disclose that the uneven section for increasing the creeping distance is provided at the surface that comes into contact with the synthetic resin on overhung section for retaining the stator winding wound around the coil winding section of the stator assembly. Patel et al. do not disclose that the circular stator core has a plurality of through holes along the outermost periphery of the surrounding synthetic resin.

Patel et al. do not disclose that the part mounting section provided for the first stator magnetic-pole assembly, and the circular stator core have a plurality of through holes, respectively, and the through holes are arranged at positions where the through holes of the part mounting sections correspond to those of the circular stator core. Patel et al. do not disclose that the synthetic resin, the first stator magnetic-pole assembly, and the second stator magnetic-pole assembly have almost the same thermal expansion coefficient.

Andrey discloses that it is well known in the art to reverse the position of the rotor of the resolver to make it of an inner or an outer rotor configuration (figures 16-19) and still perform identically.

Suzuki discloses that the stator assembly (12) having the stator windings (13) wound around the coil winding sections thereof is surrounded by a synthetic resin (130), characterized in that: the synthetic resin (130) surrounds the first stator magnetic-pole assembly and the second stator magnetic-pole assembly at the stator winding sections in a manner such that a surface at which the fixed magnetic-pole teeth of the stator core face a rotor is exposed, and a surface of the synthetic resin forms the same circumferential surface as the surface at which the fixed magnetic-pole teeth of the stator core face the rotor (figure 7).

Suzuki discloses that the first stator magnetic-pole assembly and the second stator magnetic-pole assembly include uneven sections for increasing a creeping distance at a contact section relative to the synthetic resin (133a). Suzuki discloses that the uneven section for increasing the creeping distance is provided at the surface that comes into contact with the synthetic resin on overhung section for retaining the stator winding wound around the coil winding section of the stator assembly (figure 7).

Suzuki discloses that the circular stator core has a plurality of through holes (16) along the inner periphery of the surrounding synthetic resin. Suzuki discloses that the part mounting section provided for the first stator magnetic-pole assembly, and the circular stator core have a plurality of through holes, respectively, and the through holes are arranged at positions where the through holes of the part mounting sections

correspond to those of the circular stator core. Suzuki's invention has the purpose of avoiding the different parts of the stator to become loosen.

It would have been obvious at the time the invention was made to modify the resolver disclosed by Patel et al. and provide it with the synthetic resin disclosed by Suzuki for the purpose of avoiding the different parts of the stator to become loosen.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide materials having almost the same coefficient of thermal expansion since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Application/Control Number: 09/991,718
Art Unit: 2834

Page 6

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
March 22, 2002


THOMAS M. DOUGHERTY
PRIMARY EXAMINER
GROUP 2100
260